CLAIMS

1. A method for surface toughening of a ceramic product comprising, forming uniformly distributed linear dislocation structure in the sub-surface regions of the ceramic product by using abrasives composed of fine particles having convexly curved surface and having an average particle size of 0.1μm to 250μm and a Vickers hardness (HV) of 500 or more and of a hardness (HV) of the ceramic products +50 or less.

2. The method for surface toughening of a ceramic product of claim 1, wherein the plastic working is carried out by shot blasting pressure of 0.1 to 0.5MPa, shot blasting speed of 20m/sec to 250m/sec and shot blasting time of 0.1sec/cm^2 or more to 60sec/cm^2 or less.

3. The method for surface toughening of a ceramic product of claim 1 or claim 2, wherein the dislocation density of uniformly distributed linear dislocation structure in the sub-surface regions of the ceramic product is in the range of from 1×10^4 to 9×10^{13} cm^{-2}.

4. A ceramic product possessing the structure whose dislocation density of uniformly distributed linear dislocation structure in the sub-surface regions of the ceramic product is in the range of from 1×10^4 to 9×10^{13} cm^{-2}.